

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: El-Shall

Application No.:

Examiner:

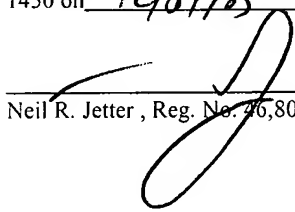
Date Filed:

Group:

For: TREATMENT OF SPENT PULPING LIQUOR WITH LIGNIN SEPARATION  
TO RECOVER ALKALI PULPING CHEMICALS IN MANUFACTURE OF  
PAPER PULP

CERTIFICATE UNDER 37 CFR 1.8(a)

I hereby certify that this correspondence is being deposited with the  
U.S. Postal Service as First Class mail in an envelope addressed to the  
Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-  
1450 on 12/01/03.

  
Neil R. Jetter, Reg. No. 26,803

**PETITION TO MAKE SPECIAL UNDER 37 C.F.R. § 1.102(d)**

Mail Stop Petition  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Pursuant to 37 CFR §1.102 and MPEP 708.02, Applicants hereby Petition to Make  
Special for an advancement of examination the above-described United States Patent Application  
filed herewith. An authorization to charge the required statutory fee under 37 CFR 1.17(h) is also  
provided. However, the Commissioner is hereby authorized to charge any deficiency in any fees  
due with the filing of this paper or credit any overpayment in any fees paid on the filing, or  
during prosecution of this application to Deposit Account No. 50-0951.

[0001] Applicants request special status for the referenced application on the basis that the claimed invention relates to "more efficient utilization and conservation of energy resources." Specifically, the traditional waste digestion liquor recovery cycle applied most frequently to kraft or semikraft process digestion liquors comprises the step of evaporating digestion waste liquor, the so-called "black liquor," to a high concentration, to so-called "concentrated black liquor." Evaporation processing clearly requires a significant energy expenditure.

[0002] The method described in the invention not only describes an energy efficient method for processing black liquor which does not require evaporation processing, but also does so highly economically, in part by producing valuable by-products, including fertilizer. Thus, lignin separation by the economically beneficial inventive process applied to certain black liquors can lead to substantial energy savings through reduced fossil fuel needs by avoiding high energy consumption of black liquor evaporation. Thus, the invention will provide more efficient utilization and conservation of energy resources recited in MPEP 708.02.

[0003] Applicants hereby assert that a pre-examination search was made regarding the subject matter claimed in the present application. The field of search related to black liquor processing with regard to published U.S. patent applications and U.S. patents.

The following related U.S. patents were identified in the search performed:

1. U.S. Patent No. 6,632,327 to El-Shall
2. U.S. Patent No. 4,724,045 to Ackel.
3. U.S. Patent No. 4,921,613 to Nordberg et al.
4. U.S. Patent No. 5,632,857 to Larson.
5. U.S. Patent No. 5,635,024 to El- Shall.
6. U.S. Patent No. 6,039,189 to Luke

[0004] U.S. Patent No. 6,632,327 to El-Shall is believed to be the closest art known to Applicants. U.S. Patent No. 6,632,327 to El-Shall discloses mixing a water soluble, surface

active, polymeric agent with digestion liquor, preferably with an additional surface active defoamer coagulant agent prior to or during acidification of the alkaline digestive liquor. This results in an easily separable, non-gelatinous, non-gummy, coagulated lignin as a solid, particulate fraction that tends to float on a clarified liquid fraction containing recoverable salts. The solids fraction and the liquid fractions are easily separated, one from the other, such as by a gravity separation step.

Detailed Discussion of the References Which Discussion Points Out,  
With the Particularity Required by 37 CFR 1.111 (b) and (c),  
How the Claimed Subject Matter is Patentable Over the References

[0005] Although U.S. Patent No. 6,632,327 to El-Shall represents a major advance in treatment of spent alkaline digestion liquor from paper pulping operations by eliminating evaporation processing, a more efficient and more economical non-evaporative method of recovering alkaline pumping chemicals is still needed.

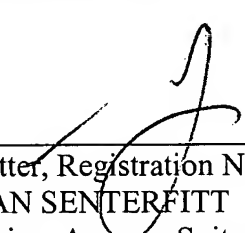
[0006] The invention utilizes an indirect method (acidulation) for producing phosphoric acid from phosphate containing material, such as phosphate rock. Although U.S. Patent No. 6,632,327 to El-Shall briefly mentions that phosphoric acid can be used rather than sulfuric acid, U.S. Patent No. 6,632,327 to El-Shall does not disclose or suggest obtaining the phosphoric acid from phosphate containing material. Use of low grade phosphate rock, for example, renders the inventive process highly economical as compared to the conventional substantially more expensive direct sources of phosphoric acid. Moreover, the invention can produce valuable fertilizer not disclosed or suggested by U.S. Patent No. 6,632,327 to El-Shall, such as calcium monophosphate (known in the trade as superphosphate). Applicants hereby submit one copy of

the above-referenced patents together with an Invention Disclosure Statement filed herewith which are deemed to be the most closely related art to the subject matter encompassed by the present claims known to Applicants.

[0007] In order to help expedite bringing this important technology to the market, Applicants respectfully requests a timely grant of this petition to make special for an advancement of examination under 37 CFR §1.102 and MPEP 708.02.

Respectfully submitted,

Date: 12/01/03



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